

South Florida/Caribbean Inventory Program

The South Florida/Caribbean Network includes six parks: Big Cypress National Preserve, Biscayne National Park, Buck Island Reef National Monument, Dry Tortugas National Park, Everglades National Park, and Virgin Islands National Park. Although these six parks are distributed over a distance of more than 1,200 miles, they share a tropical environment, with certain special characteristics making each Park unique. The National Park Service has grouped these six parks together to implement the natural resource Inventory and Monitoring Program. The Vertebrate and Vascular Plant Inventory is a major step towards gaining solid scientific baseline data for use with the long term monitoring program.

Initial research was conducted during 2000 to identify species from all available sources by visiting each of the parks. This research, contracted to the University of Miami, was conducted by a team of biologists who spent time at each park reviewing gray literature, species lists, and all other sources of species information. The intent of this effort was to complete an exhaustive literature, records, and other ancillary data search in order to augment the known composition of each park's NPSpecies database. NPSpecies is the National Park Service database to store, manage and disseminate scientific information on the biodiversity of all organisms in all National Park units throughout the United States and its territories. This data set was reviewed in the last week of September 2000 by network parks resource management personnel and outside experts to authenticate these records, and flag those records that were questionable in terms of originating from a credible source, or occurring currently in the park. These reviewed species lists have allowed the network to identify data gaps and prioritize network needs. The goal of the Vertebrate and Vascular Plant Inventory is to identify 90% of the species present in each of the following categories (Mammals, Fish, Birds, Reptiles, Amphibians, and Vascular Plants) in each of the parks. Some parks have been well surveyed and have exceeded the 90% level for some categories, while others require in-depth inventories to achieve this goal (Table 1).

The Vertebrate and Vascular Plant Inventory Study Plan addresses the network's needs for attaining the 90% goal. This includes the methods used to inventory the data gaps, the proposed staffing and budget, and a timeline. The network has been working with a budget of \$1,398,000 for a five year period to accomplish the required inventories, contribute data to servicewide NPS data initiatives, and begin planning for long term monitoring.

Table 1. Levels of Species Knowledge by Park and Category.

TAXA	BICY	BISC	BUIS	DRTO	EVER	VIIS
Mammals	66%	60%	50%	50%	72%	91%
Fish	86%	97%	69%	92%	84%	93%
Birds	99%	99%	73%	98%	90%	99%
Reptiles	88%	48%	88%	57%	96%	99%

Amphibians	88%	38%	N/A	none	99%	99%
Plants	91%	99%	99%	99%	99%	99%

Levels less than the 90% required are in red.

Table 1 provided the information the network used to prioritize which taxa needed to be inventoried during this initiative. Although the plants are all above the 90% level, there were questions about the taxonomy of the species found during the initial literature searches. Also BICY, BISC, and BUIS have areas in the park that have either been poorly or never inventoried, and may hold new species not currently on their lists. BISC was heavily impacted by hurricane Andrew in 1992 and BICY and BUIS had expanded boundaries providing new areas of exploration. Both fish (fresh and marine) and reptiles were below the required 90% level in the majority of the network parks, and became an identified need, as well.

The network held a scoping meeting in Key Largo, Florida from September 26 through September 29, 2000 to review NPSpecies. In attendance were both NPS personnel and invited taxonomic experts. The scoping meeting's goal was to determine if the network's first objective had been met (document occurrence of at least 90% of vertebrate and vascular plant species in each park). If this objective had not been achieved for any of the taxa, the group was to determine research priorities to attain this goal. Additionally, research priorities were developed to describe distribution and relative abundance for taxa.

Meeting participants reviewed each record within NPSpecies and corrections were made as needed. During this review, species were categorized "Probably Present" if the park is within species range and contains appropriate habitat. In other words, documented occurrences of the species in the adjoining region of the park give reason to suspect that it probably occurs within the park. Those in attendance at the scoping meeting decided which taxa within a park had met the 90% goal, and with some categories, some areas which have never been inventoried may or may not have new species, therefore the table may show that the park may currently exceed the 90% level, but with further investigation, experts expect to possibly encounter additional species. Some of these species lists were built on sampling limited locations of a park (i.e. mammals). Therefore, differences occur between expert opinion and database derived estimates.

Table 2. 90% Status for South Florida/Caribbean Species List

Taxa	Park	Number of Species Documented	Number of Probably Present Species	Predicted % of Species Documented	Expert Opinion on Attainment of 90% Goal
Birds	BICY	235	3	99%	Yes
	BISC	217	3	99%	Yes
	BUIS	49	13	73%	Yes
	DRTO	230	5	98%	Yes

	EVER	344	33	90%	Yes
	VIIS	140	0	99%	Yes
Fish	BICY	43	6	86%	No
	BISC	545	17	97%	No
	BUIS	253	78	69%	No
	DRTO	261	20	92%	No
	EVER	344	55	84%	No
	VIIS	302	22	93%	No
Amphibians	BICY	17	2	88%	No
	BISC	8	5	38%	No
	BUIS	N/A	N/A		N/A
	DRTO	None Present	None Present		None Present
	EVER	17	0	99%	Yes
	VIIS	7		99%	Yes
Reptiles	BICY	52	6	88%	No
	BISC	42	22	48%	No
	BUIS	8	1	88%	Yes
	DRTO	7	3	57%	Yes
	EVER	56	2	96%	Yes
	VIIS	16	0	99%	Yes
Mammals	BICY	41	14	66%	No
	BISC	30	12	60%	No
	BUIS	2	1	50%	No
	DRTO	2	1	50%	No
	EVER	43	12	72%	No
	VIIS	22	2	91%	Yes
Plants	BICY	776	73	91%	No
	BISC	317	0	99%	No
	BUIS	242	0	99%	No
	DRTO	220	0	99%	Yes
	EVER	1049	1	99%	Yes
	VIIS	740	3	99%	Yes

